## Study suggests feeding Haygain Steamed Hay reduces the risk of your horse developing IAD by 63%

The abstract of an important new study, which was presented at the American College of Veterinary Internal Medicine in June 2016, has found that steaming hay with Haygain reduces the factors responsible for Inflammatory Airway Disease (IAD) in horses by an impressive two-thirds.

The study was conducted in Europe throughout 2013 and 2014 by Dr. Julie Dauvillier and Dr. Emmanuelle van Erck-Westergren. 482 horses which had been referred for a regular health check, poor performance or respiratory issues, were scoped and their case history and results recorded.

The results found 84% of the horses examined were suffering from IAD and that in 72% of all horses the presence of different types of fungi in the airways was established. This ranged from Aspergillus through Penicillium to Mucor, Absidia, Geotrichum and Candida.

According to the researchers, the sources of these problems were found to be the bedding and forage. They discovered that horses had a 3.8 times greater chance of being diagnosed with IAD if fungi were found in their airways.

An important outcome of the study was finding that after analyzing all the forage options (dry hay, soaked hay, haylage or Haygain steamed hay) steamed hay not only had the lowest risk but was the ONLY method which significantly decreased the risk of IAD.

This means feeding horses Haygain steamed hay alone could reduce the incidence of IAD by a remarkable 63%. Or, in other words, it reduced the chances of being diagnosed with IAD by an impressive 2.7 times.

In fact, this was found to be true even if hay-steaming were the only environmental management change made in the horse's care regime.

Further, the study showed that while soaking hay or feeding haylage showed a limited reduction in respirable particles, only steamed hay significantly reduced the risk of disease [by almost two-thirds].

Aside from being laborious, soaking hay is associated with many negatives, it leaches nutrients (Moore-Colyer, 1996) the resulting post-soak liquor is an environmental pollutant (Warr and Petch, 1992) and it increases bacteria levels hugely, compromising the hygienic quality of the forage (Wyss and Pradervand, 2016). Haylage is not suitable for all horses and although lower in respirable dust compared to dry hay also benefits from improving the hygiene quality by steaming. As such, the best course open will always be to steam the horse's forage.

The study concluded that IAD is highly prevalent from environmental conditions, in particular from bedding and forage. It found that the presence of fungi was very noxious to horses' health but that proper environmental management, in particular steaming hay, had a massive impact and was shown to be uniquely effective at reducing the risk of illness.

Dr. Van Erck-Westergen had already stated in the past that IAD is in fact significantly more prevalent than is generally assumed. This partly results from the lack of obvious symptoms associated with IAD in many horses.

Indeed, there are several other research papers which supports this. Gerber *et al* (2003) looked at airway inflammation and mucus in two age groups of asymptomatic well-performing sport horses and found that although clinically healthy, all of the examined horses housed in a conventional stable environment showed evidence of inflammatory airways. Allen et al., (2006) found lower airway inflammation in 70% of National Hunt horses referred for poor performance and Nolen-Walston found that 81% of the 98 cases they looked at retrospectively had evidence of airway inflammation.

The abstract has now become available in poster format, and was also presented at the Annual Journées de la Recherche Equine in Paris recently. The full article outlining the methodology and full results is expected to be published later this year.

Download more on the study (powerpoint page).

## **References:**

ACVIM June 2016 "The Prevalence of Fungi in Respiratory Samples of Horses with Inflammatory Disease" by Dr. J Dauvillier and Dr. E Westergren.

Allen, K. J., Tremaine W.H., Franklin S.H., Prevalence of inflammatory airway disease in national hunt horses referred for investigation of poor athletic performance. Equine Vet J Suppl. 2006 Aug; (36):529-34.

Gerber V, Robinson NE, Luethi S, et al. Airway inflammation and mucus in two age groups of asymptomatic well-performing sport horses. Equine Vet J 2003; 35:491–495.

Moore-Colyer, M.J.S. (1996) The effects of soaking hay fodder for horses on dust and mineral content. *Animal Science*. **63**. 337-342.

Nolen-Walston, R.D., Harris, M., Agnew, M.E., Martin, B.B., Reef, V.B., Boston, R.C., and Davidson, E.J. (2013) Clinical and diagnostic features of inflammatory airway disease subtypes in horses examined because of poor performance: 98 cases (2004–2010) Journal of the American Veterinary Medical Association, April 15, 2013, Vol. 242, No. 8, Pages 1138-1145

Warr, E., and Petch, J (1992) Effects of soaking hay on its nutritional quality. *Equine Veterinary Education* **5**: 169-171

Wyss, U. and Pradervand, N. (2016) Steaming or Soaking. Agroscope Science. Nr 32 p32-33